

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246



Report: CERTIFIED TAB REPORT

Function: Test, Adjust, & Balance

Date: 12/04/2024

Completed By: National TAB

PROJECT

Jackson Rancheria RV Park (Jackson, CA)

Jackson Rancheria RV Park

Jackson, CA

Client

IC Refrigeration
2216 Rockefeller Dr.

Ceres, CA 95307

National TAB

Project: Jackson Rancheria RV Park (Jackson, CA)

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CERTIFICATION



PROJECT: Jackson Rancheria RV Park (Jackson, CA)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB Procedural Standard for Testing, Adjusting and Balancing of Environmental Systems. The measurements shown, and the information given, in this report are certified to be accurate and complete, at the time and date information was gathered. Any variances from design quantities, which exceed NEBB tolerances, are noted in the TAB report project summary.

NEBB TAB FIRM: National TAB - Kansas City

REGISTRATION NO: 3768

CERTIFIED BY: Will Turnbough

DATE: 9/11/2024

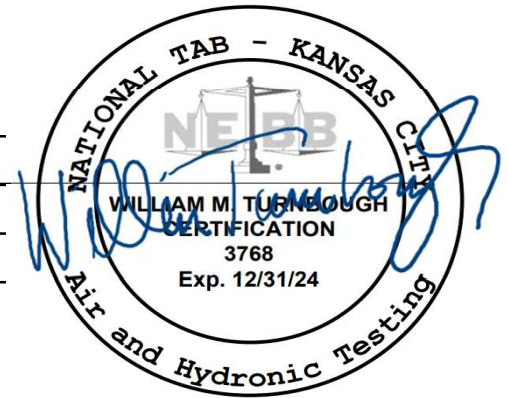
Submitted and Certified by:

NEBB TAB FIRM: National TAB - Kansas City

TAB PROFESSIONAL: Will Turnbough

REGISTRATION NO: CP-24289

CERTIFICATION EXP: 12/31/2024



National TAB

Project: Jackson Rancheria RV Park (Jackson, CA)

System/Unit: Energy Recovery Unit



Asset: ERV-1

AREA:MECH

Unit Data		
	Design	Actual
MFG	NA	DAIKIN
Model Num	NA	VAM300GVJU
Serial Num	-	F002896
Service	-	ERV
Num Exh-Filters 1	-	NONE
Exh-Filter Size 1	-	NONE
Num OA-Filters 1	-	NONE
OA-Supply Size 1	-	NONE

Exhaust Fan Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	1320
Phase	-	1
Voltage (rated)	-	220
Amperage (rated)	-	0.46
Service Factor	-	NL

OA Fan Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	1320
Phase	-	1
Voltage (rated)	-	220
Amperage (rated)	-	0.46
Service Factor	-	NL
Brake Horse Power	-	NL

Exhaust Fan Test Data		
	Design	Actual
Exh-ERU CFM	245	234
Exh-ERU RPM	-	1320
RL Voltage	-	203
RL Amperage	-	0.41

Exhaust Fan Performance Data		
	Design	Actual
Exh-ERU Filter Delta SP	-	N/A
Exh-ERU Wheel Delta SP	-	0.35"
Exh-ERU Delta T	-	10.4F

OA Fan Test Data		
	Design	Actual
OA-ERU CFM	250	240
OA-ERU RPM	-	1320
RL Voltage	-	203
RL Amperage	-	0.41

OA Fan Performance Data		
	Design	Actual
OA-ERU Filter Delta SP	-	N/A
OA-ERU Wheel Delta SP	-	0.32"
OA-ERU Delta T	-	12F

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Project: Jackson Rancheria RV Park (Jackson, CA)

Energy Recovery Unit



Diffuser Supply (GRD)

ERV-1/MECH

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	MECH (FC-1)	DUCT	7	115	87	106	92.2
1-2	39 (CAS-3)	DUCT	5	40	32	37	92.5
1-3	37 (CAS-1)	DUCT	4	15	27	16	106.7
1-4	41 (CAS-2)	DUCT	6	40	51	42	105.0
1-5	40 RETAIL	OA	6X8	40	47	39	97.5
Total				250	244	240	96%

Diffuser Ret/Exh (GRD)

ERV-1/MECH

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E1-1	E	6	75	1	69	69	69	92.0
E1-2	E	6	75	1	76	76	76	101.3
E1-3	E	6	95	1	89	89	89	93.7
Total			245		234	234	234	95.51%

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Project: Jackson Rancheria RV Park (Jackson, CA)

System/Unit: Fan Coil



Asset: FC-1

AREA:KITCHEN 25

Unit Data		
	Design	Actual
MFG	NA	DAIKIN
Model Num	NA	2109294040
Serial Num	-	FXTQ30TAVJUAAC
Configuration	-	VERTICAL

Motor Data		
	Design	Actual
Horsepower	-	1/2
Phase	-	1
Voltage (rated)	-	230
Amperage (rated)	-	3.9

Test Data		
	Design	Actual
SFAN CFM	805	872
Motor Speed SetPt	-	MEDIUM SPEED
RL Voltage	-	204
RL Amperage	-	3.3
RA CFM	690	766
OA CFM	115	106

Performance Data		
	Design	Actual
Suction ESP	-	-0.35"
Discharge ESP	-	0.27"
Total ESP	0.2	0.62"

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Project: Jackson Rancheria RV Park (Jackson, CA)

Fan Coil



Diffuser Supply (GRD)

FC-1/KITCHEN 25

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
F1-1	43	S	6	70	122	76	108.6
F1-2	36	S	6	75	117	81	108.0
F1-3	32	S	6	85	117	90	105.9
F1-4	31	S	6	75	109	79	105.3
F1-5	44	S	6	60	136	65	108.3
F1-6	30	S	6	50	117	54	108.0
F1-7	29	S	6	140	120	153	109.3
F1-8	25	S	8	250	230	274	109.6
Total				805	1068	872	108.32%

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Abbreviation List

A = Area (ft ²)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A _k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T _{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T _{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T _{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO ₂ = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C _v = Flow Constant	K _v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T _{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% _{ra} = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio



National TAB

Testing, Adjusting, and Balancing Equipment



Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	Evergreen S-PVF-1 24D-00509	6/17/2024	6/17/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper SRH77A S/N 100516003	9/18/2024	9/18/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/18/2024	9/18/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Klein Tools CL800 S/N 1220C-C1	9/18/2024	9/18/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Shimpo DT 207Lp S/N D1690029R	9/18/2024	9/18/2025



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GENERAL NOTES

1. ALL POINTS OF EXHAUST SHALL BE NO LESS THAN 10' HORIZONTALLY OR 3' VERTICALLY FROM ANY INTAKES OR OPERABLE BUILDING OPENINGS.
2. PROVIDE SOUND ATTENUATING BOOT ON ALL RETURNS. SEE DETAIL 01
3. SIZE ALL REFRIGERATION LINES TO MANUFACTURER'S RECOMMENDATIONS.

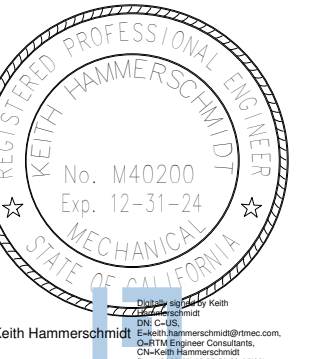
- # KEYNOTES
1. 9" EA UP TO GREENHECK RJ ROOF CAP, WITH BACKDRAFT DAMPER AND BIRD SCREEN.
 2. RETURN AIR TO PLENUM.
 3. ALL REFRIGERANT PIPING/CONDENSATE PIPING SHALL BE OUT BACK OF WALL MOUNTED CASSETTE FOR NO PIPES VISIBLE AND CLEAN INSTALLATION.
 4. PROVIDE CABLE OPERATED BALANCE DAMPER ACCESSED AT VRF CASSETTE.
 5. ROUTE CONDENSATE DRAIN TO MATCH EXISTING.

Revision	Schedule	PLAN CHECK
1	03.03.2023	

Project:

Jackson Rancheria RV Park
Registration Building Remodel
Jackson, CA.

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, WHILE EMPLOYED AND MANAGED BY JAX KNEPPERS ASSOCIATES, AND THAT I AM LICENSED UNDER THE LAWS OF THE STATE OF CALIFORNIA. THIS DOCUMENT IS AN INSTRUMENT OF SERVICE AND MAY NOT BE USED FOR ANY PURPOSE WITHOUT THE SEPARATE WRITTEN CONSENT OF THE LICENSEE LISTED BELOW.

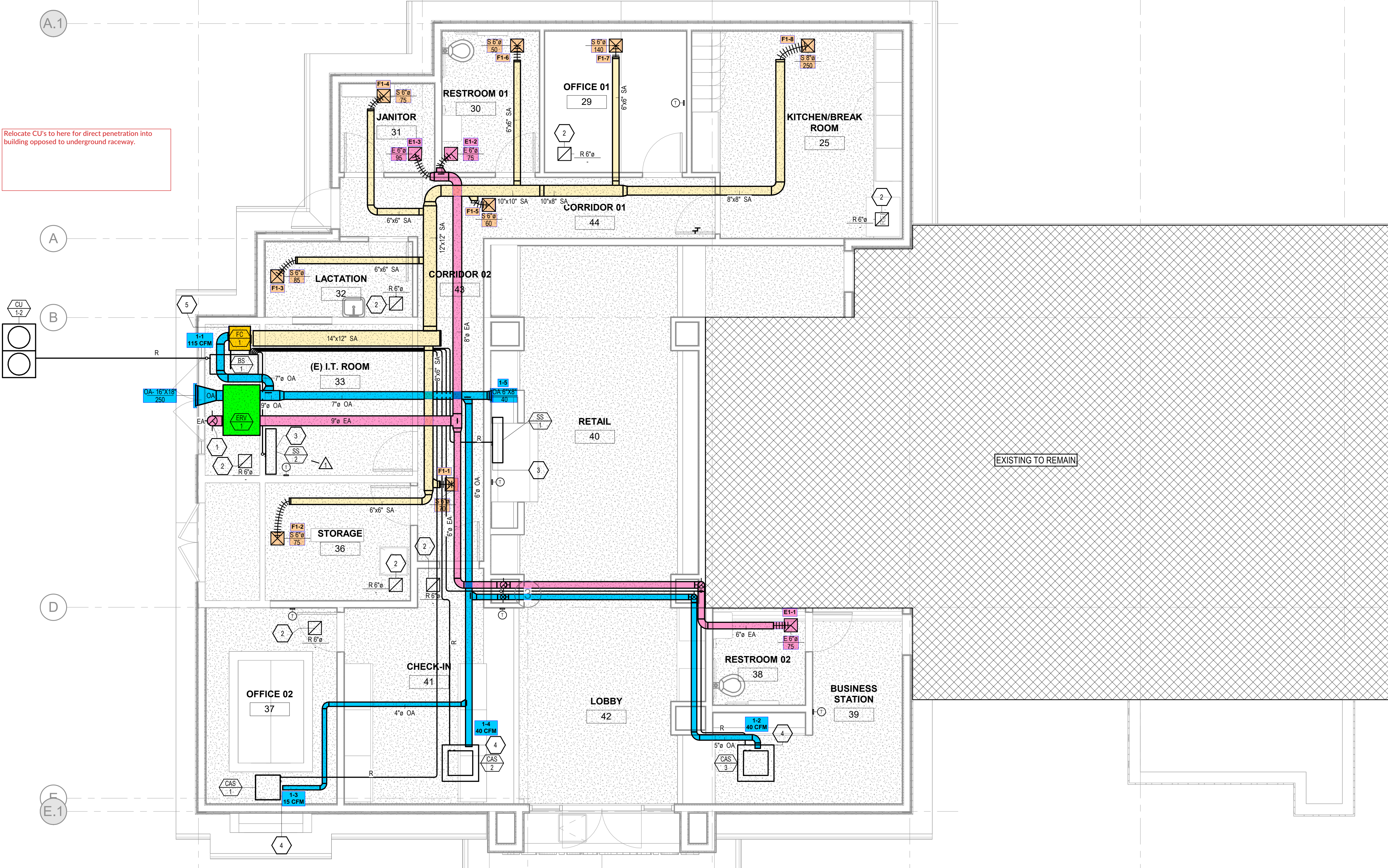


Title: MECHANICAL REFLECTED CEILING PLAN NEW

Date: 10/07/2022
Job #: 21-3945
Scale: 1/4" = 1'-0"
Checked By: KH
Drawn By: JD
Sheet No.:

M-3.0

Bid Set
06/27/2023



Relocate CU's to here for direct penetration into building opposed to underground raceway.

1 MECHANICAL REFLECTED CEILING PLAN NEW
M-3.0 1/4" = 1'-0"



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